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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/994,990

11/09/2001

Christopher D. Immer

KSC-12139-1

9113

7590

04/22/2004

EXAMINER

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Kennedy Space Center, FL 32899

ART UNIT

PAPER NUMBER

2854

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/994,990

Applicant(s)

IMMER ET AL.

Examiner

Marissa L Ferguson

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 1-4, 16-18 and 22-27 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-15 and 19-21 is/are allowed.
- 6) ☒ Claim(s) 5-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Welker (US Patent 5,578,770).

Welker teaches a fitting (54,62,66 and 68) having an input to receive a pressure input and an output (Figure 1) to receive a pressure transducer (60), a valve (18,26,30 and 32) attached to a fitting near an input, such that a fitting having a variable pressure chamber with a first and second selectable internal volumes (50 and 52) between a valve and an output (Figure 1) and a piston provided in a fitting, wherein a piston (54) is remotely movable between first and second positions for selecting a first internal volume at a first position and a second internal volume at a second position volumes.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6 and 7 are rejected under 35 U.S.C.103 (a) as being unpatentable over Welker (U.S. 5,578,770) in view of Geiger (U.S. Patent 4,730,789).

Welker teaches the invention except for a piston that moves in response to an electro magnet and a valve that can be opened/closed remotely. Geiger discloses a piston that moves in response to an electro magnet and the valve that can be opened/closed remotely (Column 17, Lines 36-68).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the invention taught by Welker to include a piston and an electro magnet as taught by Geiger, since Geiger teaches using a electromagnet for moving the piston a predetermined displacement.

3. Claims 8-10 are rejected under 35 U.S.C.103 (a) as being unpatentable over Welker (U.S. 5,578,770) in view of Kluth (U.S. Patent 5,582,064).

Welker teaches the invention except for a secondary tube attached to a primary tube between a first and second end, wherein a secondary tube contains a piston, and a secondary tube that is attached generally perpendicular to a primary tube. Kluth discloses a secondary tube (25) attached to the primary tube (1) between the first and second ends (Figure 6), wherein the secondary tube contains the piston (24), and the secondary tube is attached generally perpendicular to the primary tube (Figure 6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the device of Welker to include a secondary tube attached generally perpendicular to a primary tube as taught by Kluth, since Kluth teaches measuring several pressures with different characteristics that are adjacent to each other.

***Allowable Subject Matter***

4. Claims 11-15 and 19-21 are allowed.

***Response to Arguments***

5. Applicant's arguments filed 1/20/04 have been fully considered but they are not persuasive. In response to applicant's argument that the prior art reference Welker, "does not suggest, much less teach the use of two selectable volumes capable of achieving pressure change within the volume", examiner notes a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). In this case, Welker teaches an apparatus that discloses the use of two variable volume spaces and an actuating piston. Since, the apparatus selectively actuates the same way the necessary function of changing pressures within the volume can be performed.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

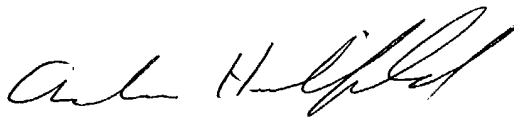
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa L Ferguson whose telephone number is (571) 272-2163. The examiner can normally be reached on (M-T) 6:30am-4:00pm and every other(F) 7:30am-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marissa L Ferguson  
Examiner  
Art Unit 2854

*MLF*  
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**ANDREW H. HIRSHFELD**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**